

June 4, 2007

MEMORANDUM

TO: Mr. Steve Murray, P.L.S. - Tippecanoe County Surveyor

FROM: David W. Eichelberger, P.E. - CBBEL, Indianapolis

PROJECT: The Greens Planned Development
CBBEL Project No. 02-038 (GI)

DEVELOPER/OWNER: The Greens, LLC/Robert L. Meister

LOCATION: 40° 26' 10" Latitude
-86° 57' 53" Longitude

RECOMMENDATION: Final Approval with Conditions

An existing golf course located immediately southeast of the State Road 26/County Road 325 West intersection will be developed as a 21-lot, 32.4-acre residential subdivision in Wabash Township. The proposed subdivision will be served by a single, private access drive from State Road 26 terminating in a cul-de-sac at the south end of the property. Individual wells and septic systems will be provided for the proposed lots. Existing stormwater runoff from the site drains to three (3) points: a small on-site pond along the east property line; a natural off-site drainageway at the east property line north of the pond; and to an off-site 24-inch diameter RCP driveway culvert at the southwest corner of the site. The pond/east property line release points ultimately discharge directly to Jordan Creek via a natural stream channel. The off-site driveway culvert maintains flow to a ditch extending southward to an existing pond within a residential area. Moreover, a 70-acre off-site watershed west of County Road 325 West drains through the project site to the on-site pond via a 36-inch diameter CMP culvert. Tree preservation and minimal grading to maintain existing drainage features have been considered in the design of this project. Grassed swales will be added to provide post-construction conveyance to culvert pipes below the access drive.

Based on information available to CBBEL, it does not appear that any Tippecanoe County Regulated Drain exists at or near the project site. There are no regulated drain encroachments or crossings proposed with this development. As previously noted, the project site discharges to a natural stream channel to the east and to an existing off-site pond within a residential area to the south. The downstream receiving system for the project site watershed is Jordan Creek, which ultimately drains into the Wabash River. The project site is within the Tippecanoe County MS4 Area as well as the Wabash River-Jordan Creek 305(b) Priority Watershed.

This project was previously reviewed in a memorandum dated May 8, 2007. After a review of the most recently provided information, CBBEL recommends final approval of the stormwater management plan with the following conditions:

Variances/Encroachments

1. The applicant is requesting a variance from Chapter 6 of the Standards, which requires a 6:1 sideslope above the maintenance ledge for ponds constructed without a fence. The applicant is proposing a 3:1 sideslope above the maintenance ledge.

Stormwater Quantity

1. The applicant has proposed to construct a “vehicular safety rail” along the proposed road adjacent to the proposed pond. The applicant should coordinate the type of safety rail with the Tippecanoe County Surveyor’s Office.
2. The applicant is proposing to utilize existing drainage features in order to minimize grading and to preserve trees on the site. As such, much of the responsibility for proper interior drainage will fall to the individual homebuilder. The applicant has provided a grading plan that details the expected drainage patterns for each lot. The applicant will provide the grading plan to individual homebuilders and is requiring the homebuilder to provide a Site Engineered Plan (SEP) to verify that the expected drainage patterns are followed. The development will have a building committee to review and approve the SEP before submittal to the County for a building permit.
3. The applicant has shown the approximate location of the existing 10”+/- field tile that drains property west of the subject site. The applicant is proposing to intercept the existing tile at the west property line, relocate it through the site within proposed drainage easements, and outlet it at the proposed pond along the east property line. Inspection ports will be included at proposed changes of direction along the relocated tile route. The plans indicate that the proposed relocated tile will have a capacity equal to, or exceeding, the existing tile. The applicant should coordinate the size, inverts, and material of the relocated tile with the Tippecanoe County Surveyor’s Office.
4. The applicant has provided revised ICPR models for the subject development. The applicant should review the construction plans and ICPR models and resolve the following apparent discrepancies:
 - a. The dry pond orifice is shown as 4.5” in the ICPR input and 4” on the plans.
 - b. The dry pond outlet pipe is 35 feet in the ICPR model and 28 feet on the plans.
 - c. The east pond outlet pipe is 80 feet in the ICPR model and 102 feet on the plans.
 - d. The on-site north culvert inverts in the ICPR model do not match the plans.

Stormwater Quality

1. The Stormwater Pollution Prevention Plan (SWPPP) should be amended to address the following issues:
 - a. Item A14 on Sheet 11 should be revised to include pre- and post-construction discharge rates for the proposed dry pond, as determined by the ICPR model.
 - b. Item C3 on Sheet 11 should include the description of post-construction stormwater quality measures for the southwest portion of the site.

2. The applicant must provide a revised O & M Manual for the subject site. The O & M Manual must include all stormwater quantity and quality measures, including the relocated tile. In addition, an estimate of the needed annual assessment for maintenance and inspection of the drainage facilities must be included in the O & M Manual.

General Conditions

1. The applicant must present the project at the Tippecanoe County Drainage Board meeting for the project to be considered for approval.
2. The applicant must pay any final drainage review fees per Ordinance 2005-04-CM and submit a letter to the County Surveyor's Office stating that these fees will be paid.
3. The applicant must pay the Phase II stormwater program fees.
4. The applicant must provide proof to the Tippecanoe County Surveyor's Office (TCSO), of the formation of a Homeowners Association (HOA), which will assess sufficient funds for the inspection and maintenance of all drainage facilities. An estimate of the needed annual assessment for maintenance and inspection of the drainage facilities must also be provided to the TCSO. In addition, a yearly report must be submitted to the TCSO to show that the HOA is still active and to report the amount of assessments collected.
5. The applicant must provide recorded copies of restrictive covenants satisfactory to the Tippecanoe County Drainage Board and the Tippecanoe County Surveyor's Office.
6. If no assurance is required under the Unified Subdivision Ordinance, Section 4.1, the Comprehensive Stormwater Management Ordinance of Tippecanoe County (Ordinance) still requires an assurance, made out to the Tippecanoe County Drainage Board, for an amount equal to 100% of the total costs of implementing measures required by Chapters 3, 4, and 5 of the Ordinance. See Chapter 6, Section 7 of the Ordinance for more information.
7. The property owner, developer, or contractor shall be required to file a three-year maintenance bond or other acceptable guarantee with the Tippecanoe County Drainage Board, prior to final approval, in an amount not to exceed ten percent (10%) of the cost of the stormwater drainage system located outside the public road right-of-ways. See Chapter 6, Section 9 of the Ordinance for more information.
8. All listed issues must be completely addressed before final plan approval and sign-off will be granted by the County Surveyor's Office.

No error or omission in either the plans, calculations or applications (whether said plans, calculations or applications have been reviewed by the review engineer or not) shall permit or release the applicant and designer from constructing this work in any other manner than that provided for in the County Ordinance.

pc: C & S Engineering/American Structurepoint, Inc.
DWE/sdb
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